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EXAMINER

HAN, QI

ART UNIT PAPER NUMBER

2654

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/803,974

Applicant(s)

HOGENHOUT ET AL.

Examiner

Qi Han

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☒ Claim(s) 1-14 and 16-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/13/01&6/13/02
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The references listed in the Information Disclosure Statement submitted on 06/13/2002 have been considered by the examiner (see attached PTO-1449).

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

3. The disclosure is objected to because of the following informalities:
  - a. The subtitles are missing. Examiner suggests that applicant use the preferred layout to add subtitles of the appropriate sections in the specification.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program

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listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Regarding claim 1, the claim recites that a user interface apparatus **comprises** status means, generating means and output means, while the specification (see page 5, lines 10-12, and pages 6-7) and the drawing (Fig.1) suggest that status means, generating means and output means are **not included** in the user interface (apparatus).

Regarding claim 14, the claim recites a processing apparatus comprise both the user interface apparatus and a machine, wherein the processing apparatus lacks clear and specific disclosure in the specification.

Regarding claims 9 and 23, the limitation of “natural language prefix and suffix” lacks support in the specification, which will be interpreted as “surrounding phrases” (see specification, page 9, lines 5-7 and Fig. 4) hereinafter.

### *Claim Objections*

5. Claims 1-14 and 16-29 are objected to because of the following informalities:

Regarding claim 1, the phrase “User interface apparatus for uce” in the first line of the claim appears to be --A user interface apparatus for use--. Appropriate correction is required.

Regarding claims 2-13, the phrase “User interface apparatus” in the first line of the respective claims appears to be --The user interface apparatus--. Appropriate correction is required.

Regarding claim 14, the phrase “Processing apparatus” in the first line of the claim appears to be --A processing apparatus--, and the phrase “a machine” in the second line of the claim appears to be --said machine--. Appropriate correction is required.

Regarding claims 16-27, the phrase “A user interface method” in the first line of the respective claims appears to be --The user interface method--. Appropriate correction is required.

Regarding claim 28, the claim recites program code while it parent claims recite a user interface method, which lacks the consistence of the statutory patentable classes between independent and dependent claims. Appropriate correction is required. As best understand, the

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claim will be interpreted as "The user interface method according to claim 15, being implemented by a program code for controlling a processor" hereinafter.

Regarding claim 29, the rejection is based on the same or similar reason as described for claim 28 (see above). Appropriate correction is required. As best understand, the claim will be interpreted as "The user interface method according to claim 16, wherein the program code is stored in a computer readable carrier medium" hereinafter.

6. Concerning multiple errors found in the application, applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, drawing and claims.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 3 recites the limitation "the requested instruction" in last two lines of the claim. There is insufficient antecedent basis for this limitation in the claim(s). The claim will be interpreted as "a requested instruction"

Claim 26 recites the limitation "said text" in line 2. There is insufficient antecedent basis for this limitation in the claim(s). The claim appears and will be interpreted to depend upon claim 25 (not claim 23).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 10-22 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JUNQUA et al. (US 6,415,257 B1) hereinafter referenced as JUNQUA, in view of HOFFBERG et al. (US 6,400,996 B1) hereinafter referenced as HOFFBERG.

As per **claim 1**, as best understood in view of the objection(s) (see above), JUNQUA discloses system for identifying and adapting a TV-user profile by means of speech technology (title), comprising:

generating means [responsive to the obtained current state of said machine] to generate information to inform a user of a natural language instruction which can be input to said machine to achieve the current state of said machine (column 3, lines 35-65 and Fig. 1, 'natural language parser 24 supplies a semantic relation of the user's input to the command module 30 (herein combined blocks 24 and 30 corresponds to the generating means)', 'This module, in turn, commands (corresponding to a natural language instruction) the tuner 32 (machine) in making channel selections (corresponding to different machine states including a current state)', 'the command module 30 sends (input) a command to tuner 32 to access an electronic program guide

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(wherein reflecting one of machine state, which is interpreted as current state); column 3, line 65 to column 4, 'the command module will notify (inform) the user by synthesized voiced response (generating information to the user) and /or display by display of suitable text prompt (generating information to the user) on the television screen 36'); and

output means for outputting the generated information to the user, (Fig. column 3, line 65 to column 4, line 3, 'the command module will notify (inform) the user by synthesized voiced response (outputting the generated information to the user) and /or by display of suitable text prompt (outputting the generated information to the user) on the television screen 36 (output means)').

But, JUNQUA does not expressly disclose "status means for obtaining a current state of said machine". However, this feature is well known in the art as evidenced by HOFFBERG who discloses adaptive pattern recognition based control system and method (title), comprising a programmable apparatus that includes a control means monitoring a status of the apparatus to determining the occurrence of various events (column 72, lines 11-21), and the intelligent device may be used for analyzing data patterns indicative particular states and the system may set/control/monitor the status of any home-based device (column 148, lines 32-49). Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify JUNQUA by specifically providing a status means for monitoring states of a device, as taught by HOFFBERG, for the purpose of detecting abnormal patterns or changes in condition (HOFFBERG: column 148, line 49).

As per **claim 2** (depending on claim 1), JUNQUA further discloses a means for receiving a request from a user of said machine for said information, wherein said generating means is



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adapted to be responsive to a received request to generate said information, (Fig. 1, block 10, 'speech input (for receiving request from user', and blocks 12, 24 and 30, 'speech recognizer', natural language parser' and 'command module' that respond to the request and generate the information).

As per **claim 3** (depending on claim 1), as best understood in view of rejection under 35 USC 112 2<sup>nd</sup> (see above), JUNQUA further discloses a means for receiving a request from a user, who has input a natural language instruction to arrive at the current state, of said machine for an appropriate natural language instruction to reach the current state, wherein said generating means is adapted to be responsive to a received request to generate said information as a requested instruction, (Fig. 1, block 10, 'speech input (for receiving request from user', and blocks 12, 24 and 30, 'speech recognizer', natural language parser' and 'command module' that respond to the request and generate the information as command (requested instruction) to input to device 32; column 2, lines 29-30, 'the user interacts with the system by speaking, using natural language').

As per **claim 4** (depending on claim 1), JUNQUA in view of HOFFBERG further discloses that the status means is adapted to maintain a data structure containing attributes defining the current state of the machine, each attribute having a number of possible values, (JUNQUA: column 4, lines 40-57, 'frame data structure', 'one frame may have slots directed to attributes (inherently including multiple values) of a movies director, and type of movies', 'another frame may have slots directed to attributes associated with the time, the channel (including different values), and so forth'; column 3, lines 53-55, 'the command module 30 sends a command to tuner 32 to access an electronic program guide (inherent includes data

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structure with attributes)', so that the combined system is capable of implementing the claimed functionality).

As per **claim 5** (depending on claim 4), JUNQUA in view of HOFFBERG further discloses that each attribute has at least one natural language fragment associated therewith, and said generating means is adapted to generate said information by building up a natural language instruction from said natural language fragments for said attributes for the current state of said machine, (JUNQUA: column 2, lines 29-30, 'the user interacts with the system by speaking, using natural language'; column 4, lines 40-51, 'a frame data structure (whose domain is tuner commands) include an empty slot (reflecting an attribute) for specifying the viewer-requested channel (corresponding to one natural language fragment) for a time period', which means that the slots of a frame data structure can be filled by appropriate attribute data and the form a natural language command (instruction) as claimed).

As per **claim 6** (depending on claim 5), JUNQUA in view of HOFFBERG further discloses that the generating means is adapted to build said natural language instruction in accordance with natural language rules, (JUNQUA: column 3 lines 6-7, 'the system include a natural language parser 24 that uses a set of pre-defined grammars (rules)').

As per **claim 7** (depending on claim 5), JUNQUA in view of HOFFBERG further discloses said the generating means is adapted to order said natural language fragments in accordance with order rules, (JUNQUA: column 4 lines 6-7, 'the frame data structure contains empty slots that are filled when the semantic interpretation of global parser matches the frame', which means that the order rules of the language fragments is inherently included in the frame).

As per **claim 8** (depending on claim 5), JUNQUA in view of HOFFBERG further discloses that the generating means is adapted to replace elements in the natural language instruction with other elements in dependence upon at least one of previous user interactions, preferred synonyms, user preferences, and natural language input recognition problems, (JUNQUA: column 4 lines 63-65, 'use dialog history data (previous user interaction) file 176 to assist in filling in empty slot'; column 5, lines 45-55, 'generates several alternative parse-tree, each parse-tree representing a possibly different interpretation of a particular topic' and 'the (N) best candidates are selected', which are broadly interpreted as synonyms or recognition problems (referred in the specification, page 8, line 17 to page 9, line 3)).

As per **claim 10** (depending on claim 1), JUNQUA further discloses that the generating means is adapted to generate said information as text, (column 5 lines 6-7, 'natural language text may have been generated as the output of an automatic speech recognition system', 'the natural language module translates the natural language text input to a new representation (of text) by generating well-structured tags').

As per **claim 11** (depending on claim 10), as stated above, JUNQUA discloses that the output means is adapted to display said text, (column 4, line 3, 'by display of suitable text prompt on the television screen 36 (output means)').

As per **claim 12** (depending on claim 10), as stated above, JUNQUA discloses that the output means includes speech synthesis means for synthesizing speech from said text and audio output means for audibly outputting said speech, (column 3, line 65 to column 4, line 1, 'the command module will notify (output) the user by synthesized voiced response (speech); Fig. 1, block 44, 'speech synthesizer').

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As per **claim 13** (depending on claim 1), as stated above, JUNQUA discloses that the generating means is adapted to generate said information as speech data, (column 3, line 65 to column 4, line 1, 'the command module will notify (output) the user by synthesized voiced response (speech data); Fig. 1, block 44, 'speech synthesizer').

As per **claim 14** (depending on claim 1), as best understand in view of the objection(s) (see above), and as stated for claim 1, JUNQUA discloses processing apparatus comprising the user interface apparatus and a [said] machine which can receive a number of user instructions to reach one of a plurality of possible machine states, said machine including instructions input means to input said user instructions to said machine using at least natural language as a mode of input (Fig. 1, blocks 10, 24, 30, 32; column 3, lines 35-55, 'the natural language parser 24 supplies a semantic relation of the user's input to the command module 30' and 'This module, in turn, commands (input) the tuner 32 (the machine) in making channel selections and in setting various tuner functions (through the commands (instructions))', 'command module 30 sends (input) a command (instruction) to tuner 32 (the machine) to access an electronic program guide').

As per **claims 15-22 and 24-27**, they recite a method. The rejection is based on the same reason as described for claims 1-8 and 10-13 respectively, because the claims recite same or similar limitation(s) as claims 1-8 and 10-13 respectively.

As per **claim 28** (depending on claim 1), as best understand in view of the objection(s) (see above), JUNQUA in view of HOFFBERG further discloses the system using computer (column 4, line 50 and line 60) and processor (column 9, line 39) that is inherently controlled by

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a program code (software), which is read on the claimed “being implemented by a program code for controlling a processor”.

As per **claim 29** (depending on claim 28), as best understand in view of the objection(s) (see above), JUNQUA in view of HOFFBERG further discloses the system using computer (column 4, line 50 and line 60) that inherently includes computer readable medium for storing program code, and having memory (column 9, line 39), which is read on the claimed “the program code is stored in a computer readable carrier medium”.

9. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JUNQUA and HOFFBERG as applied to claims 5 and 19 above, and further in view of well known prior art (MPEP 2144.03).

As per **claim 9** (depending on claim 5), as best understand in view of the objection(s) (see above), JUNQUA in view of HOFFBERG does not expressly disclose to add natural language elements to said natural language instruction as at least one of a natural language prefix and suffix (interpreted as surrounding phrases). However, an official notice is taken that the feature of adding surrounding phrases to a natural language instruction is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at time the invention was made to modify JUNQUA in view of HOFFBERG by specifically adding surrounding phrases to a natural language instruction, for the purpose of clearly expressing a user request or intention.

As per **claim 23** (depending on claim 19), the rejection is based on the same reason as described for claim 9, because the claim recites same or similar limitation(s) as claim 9.

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***Conclusion***

10. Any response to this action should be mailed to:  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450  
**or faxed to:**  
(703) 872-9306, (for formal communications intended for entry)  
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"PROPOSED" or "DRAFT")

Patent Correspondence delivered by hand or delivery services, other than the USPS, should be addressed as follows and brought to U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA, 22202

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (703) 305-5631. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-6954.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh  
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*Donald L. Storm*  
PATENT EXAMINER  
AU 2654